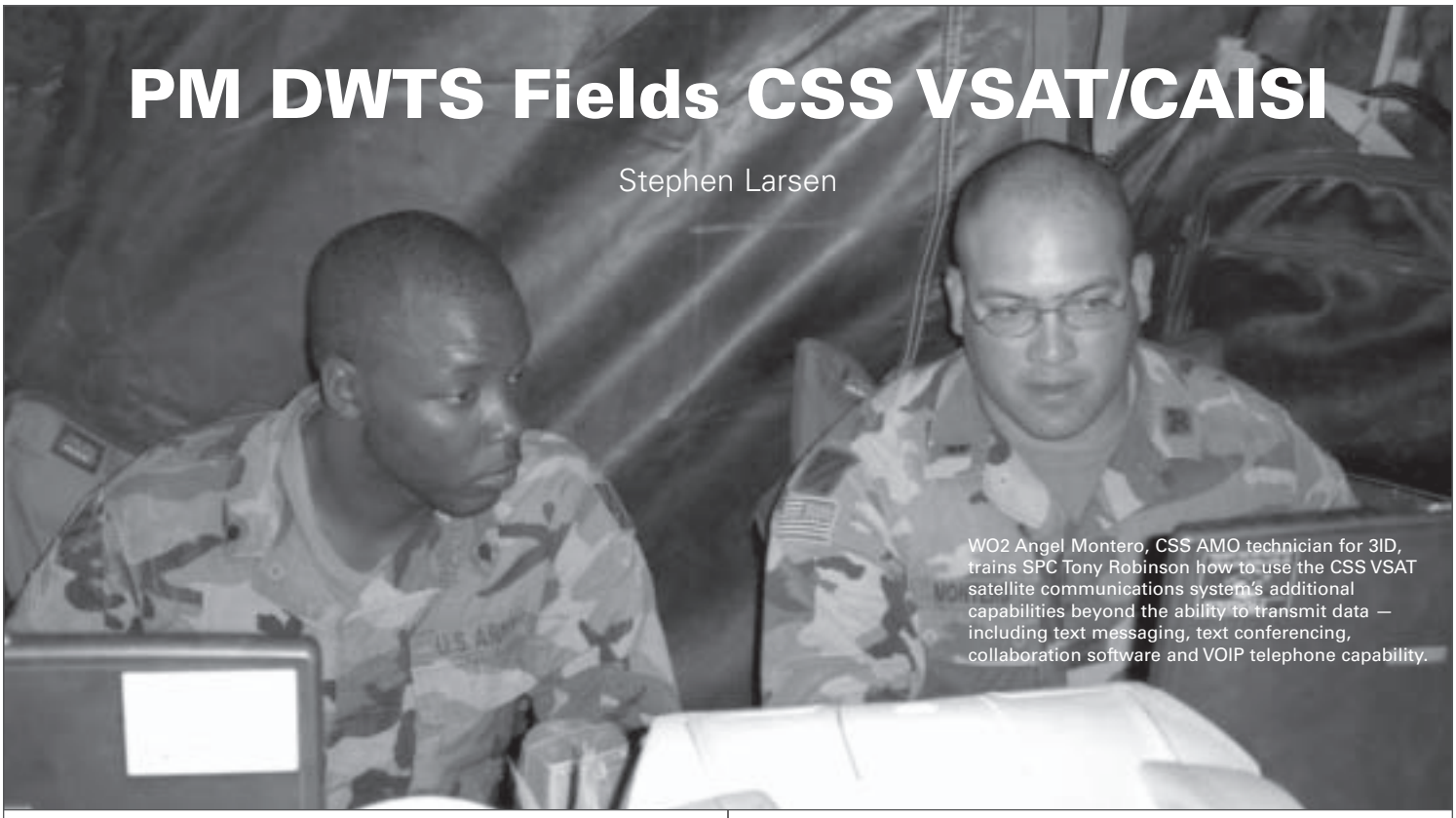
PM DWTS Fields CSS VSAT/CAISI

Stephen Larsen



WO2 Angel Montero, CSS AMO technician for 3ID, trains SPC Tony Robinson how to use the CSS VSAT satellite communications system's additional capabilities beyond the ability to transmit data — including text messaging, text conferencing, collaboration software and VOIP telephone capability.

Continuing the march forward in implementing the Army Deputy Chief of Staff for Logistics' (G-4) initiative to "Connect the Logistician," the Project Manager for Defense Communications and Army Transmission Systems' Product Manager for Defense Wide Transmission Systems (PM DWTS) completed fielding the Combat Service Support Very Small Aperture Terminal (CSS VSAT) satellite communications systems and the CSS Automated Information Systems Interface (CAISI) to the 3rd Infantry Division (3ID) (Mechanized) at Fort Stewart, GA, on Oct. 8, 2004. PM DWTS is now fielding the system to the 101st Airborne Division (AD) (Air Assault) at Fort Campbell, KY, and the 10th Mountain Division (MD) (Light Infantry) at Fort Drum, NY, as well.

The combination of CSS VSAT and CAISI increases readiness by giving CSS Soldiers in the field the ability to electronically transmit supply requisitions and receive near-real-time status reports on their orders. The system also enhances force protection by greatly reducing the need for Soldiers to convoy into or through high-risk locations to deliver detailed logistical orders. Likewise, maintenance meetings can now be conducted "virtually" via CSS VSAT/CAISI.

All told, PM DWTS fielded 40 CSS VSAT systems to the 3ID and nondivisional support units, replacing the 11 prototype systems that they had previously fielded for 3ID's use during its rotation through the National Training Center (NTC), Fort Irwin, CA, from May 22 to June 18, 2004.

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System Improvements

According to John Andrews, Program Readiness Manager for PM DWTS' Assistant Product Manager, DWTS-Belvoir, Fort Belvoir, VA, the new CSS VSAT model requires less radio frequency energy and allows for manual pedestal positioning. It also features a slightly larger antenna dish — a two-piece dish with interlocking connections that is 1.2 meters in diameter, compared to .96 meters for the prototype model.

"It might seem like a small increase," said Andrews, "but that increase allows for greater beam coverage and means less rain-fade degradation." Rain-fade degradation is the

weakening of transmission caused by raindrops absorbing and scattering electromagnetic signals traveling through the atmosphere.

WO2 Angel Montero, CSS Automation Management Office (AMO) technician for 3ID, ran the prototype CSS VSATs through their paces during 3ID's NTC rotation. He gives the system high marks as "a beast — a combat multiplier," and agreed that the new dish antenna is an improvement "to an already-robust system."

"Across the water, in Iraq, the bigger (1.2 meter) dish offers better performance because there will be no degradation of service such as you could have with a smaller dish," Montero explained.

Andrews said that the new CSS VSAT model has a smaller logistics footprint on the battlefield. It fits into four transit cases, as opposed to five cases for the prototype model, and weighs 519 pounds versus 609 pounds for the prototype.

"These small improvements will reap big dividends," Montero remarked. "The system is a whole lot more transportable. It's easier for the maneuver units to load the system and, since we (CSS AMO personnel) are carrying spares, it makes it easier for us to move around as well," Montero continued.

During 3ID's NTC rotation, Montero and Logistics Assistance Representative Bill Flynn, U.S. Army Communications-Electronics Command, took the spirit intended by the term "connect the logistician" and went even further, adding additional capabilities beyond the ability to transmit data. These capabilities include text messaging, text conferencing, collaboration software, Voice Over Internet Protocol (VOIP) telephone capability and the ability to remotely monitor and correct users' problems — often before users even know they have a problem. They've now documented what they accomplished so that new units getting CSS VSAT will have a rock-solid foundation.

"We started at NTC as a 'test' system," Montero reflected. "Now we have a fixed infrastructure in place, all diagrammed out, every brigade that goes out can start at the same point. Every brigade now has the same capability."

Shown here is the new model of the CSS VSAT satellite communications system, featuring a slightly larger antenna dish — a 2-piece dish with interlocking connections that is 1.2 meters in diameter, compared to .96 meters for the prototype. That small increase allows for greater beam coverage and means less rain-fade degradation, which translates into better performance.

Units that can immediately benefit from the foundation laid by Montero, Flynn and the 3ID are both the 101st AD and the 10th MD to which they started fielding CSS VSATs Oct. 13, 2004.

According to MAJ Michael Devine, APM DWTS-Belvoir will field 32 CCS VSATs to the 101st AD and 24 CCS VSATs to the 10th MD. They expect to complete fielding to the 101st AD in January 2005 and to the 10th MD by July 2005.

'Communication-on-the-Move' Architecture

In the big picture, Devine said, his team's fielding of CSS VSAT/CAISI ties in with the Army's 3-tiered Joint Network Transport Capability-Spiral initiative, which includes the "Connect the Logistician" program, the Joint Network Node (JNN) and the Trojan Special Purpose Integrated Remote Intelligence Terminal (SPIRIT).

"These systems are all designed to give the Army the ability to communicate reliably in a nonlinear battlespace," Devine forecasted. "These programs will increase bandwidth available to our troops, provide Internet protocol architecture and give warfighters and their commanders access to the .mil network."

As a Soldier in a "tip-of-the-spear unit," Montero looks forward to when this comes to fruition. "What does CSS VSAT tie together with JNN and Trojan SPIRIT for the warfighter?" asked Montero. "If everything works as advertised, it's going to give us the most robust communications capability in the history of warfare — from there, the only limits are your imagination."

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